

REMARKS

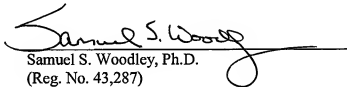
Claims 1-9 are pending in this application, of which claims 1-7 are at issue. Claims 8-9 have been withdrawn from consideration as directed to non-elected subject matter. The claims at issue remain rejected under 35 U.S.C. 103(a) as unpatentable over U.S. Patent No. 7,309,446 by Kley *et al.* ("Kley") in view of U.S. Patent Application Publication No. 2003/0205190 by Linares *et al.* ("Linares") and/or NO. 2004/01992620 by Pope *et al.* ("Pope"). The Advisory Action indicates that the inventors' previous declarations/affidavits do not place the application in condition for allowance because "there is no evidence of any type of work being performed in April 2004." *Advisory Action at page 2.*

In response, Applicants submit herewith a Third Declaration of Jae Kap Lee and Phillip John Under 37 C.F.R. 1.131 (hereinafter referred to as the "Inventors' Third Declaration") giving evidence of their diligence in April 2004. In particular, the Inventors' Third Declaration includes, as Exhibit A, a Second Declaration by the inventor Jae Kap Lee (the "Second Lee Declaration") and presenting evidence from his computer. The evidence includes Exhibit 1, a screen image of Dr. Lee's personal computer that lists certain files stored on that computer's hard drive. These include a file named "onsio2" last edited by Dr. Lee on April 6, 2004 and describing the subject matter disclosed and claimed in this application. A true and accurate copy of Dr. Lee's "onsio2" file is also provided as Exhibit 2 of his Second Declaration.

In view of the foregoing, Applicants respectfully submit that the inventors affidavits and declarations submitted for this application are sufficient to remove the Kley patent as "prior art" under 35 U.S.C. § 102(e), and therefore obviate the outstanding rejection under 35 U.S.C. § 103(a). Withdrawal of the rejection, rejoinder of the withdrawn claims and an allowance of this application are therefore all respectfully requested. The Examiner is, moreover, invited to contact Applicants' undersigned representative(s) in the event any questions arise regarding this communication or the application in general.

Respectfully submitted,

Date: June 11, 2010


Samuel S. Woodley, Ph.D.
(Reg. No. 43,287)

Customer Number 26211
Fish & Richardson P.C.
Telephone: (212) 765-5070
Facsimile: (877) 769-7945

Attachments:

- Third Declaration of Jae Kap Lee and Philip John Under 37 C.F.R. 1.131, including:
 - Exhibit A: Second Declaration of Jae Kap Lee;
 - Exhibit 1: Screen image from personal computer of Jae-Kap Lee; and
 - Exhibit 2: Printed copy of file "onsio2."

Attorney Docket No.: 27573-0080 US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jae Kap Lee & Phillip John

Serial No. : 10/574,264

Filed : March 31, 2006

Titled : DIAMONE SHELL WITH A
GEOMETFICAL FIGURE AND
METHOD FOR FABRICATION
THEREOF

Confirmation No.: 7194

Art Unit : 1792

Examiner : Joseph Albert MILLER, Jr.

THIRD DECLARATION OF JAE KAP LEE AND PHILLIP JOHN
UNDER 37 C.F.R. § 1.131

I, Jae Kap Lee, and I, Phillip John, do hereby declare and state as follows:

1. We are the inventors of the subject matter described and claimed in the above-captioned patent application.
2. The statements made in this Declaration are made in furtherance of statements in our previous Declarations signed on March 10, 2009 and August 18, 2009, and in furtherance of statements in the previous Declaration of Jae Kap Lee signed on March 12, 2010. We understand that these Declarations were submitted to the United States Patent and Trademark Office on March 11, 2009; on August 21, 2009 and on March 17, 2010, respectively.
3. We understand that the patent Examiner continues to reject the claims of this application despite the evidence of our prior Declarations. In particular, we understand the patent Examiner has objected that there is no evidence of any work or activity on the invention in April 2004.
4. Attached hereto, as Exhibit A of this Declaration, is another declaration by the inventor Jae Kap Lee, presenting evidence of our work on the invention in April 2004.

Applicant : Jae Kap Lee & Phillip John,
Serial No. : 10/574,264
Filed : March 31, 2006
Page : 2 of 2

Attorney's Docket No.: 27573-0080 US1

5. We declare that all statements made herein of our own knowledge and true, and that statements made on information and belief are believed to be true. We further declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine, or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant application or of any patent issued thereupon.

Respectfully submitted,

Date: 31 May 2010

Jae Kap Lee
Jae Kap Lee

Date: 21 May 2010

Phillip John
Phillip John

Attachment:

- Exhibit A Second Declaration of Jae Kap Lee, including Exhibits 1-2

EXHIBIT A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jae Kap Lee & Phillip John

Serial No. : 10/574,264

Filed : March 31, 2006

Titled: : DIAMOND SHELL WITH A
GEOMETRICAL FIGURE AND
METHOD FOR FABRICATION
THEREOF

Confirmation No.: 7194

Art Unit : 1792

Examiner : Joseph Albert MILLER, Jr.

SECOND DECLARATION OF JAE KAP LEE

I, Jae Kap Lee, do hereby declare and state as follows:

1. I am one of the inventors, along with Phillip John, of subject matter described and claimed in the above-captioned patent application.
2. I am the same Jae Kap Lee who signed Declarations, along with Phillip John, on March 10, 2009 and August 18, 2009 in connection with the above-captioned application. I understand that those Declarations were submitted to the United States Patent and Trademark Office (the "PTO") on March 11, 2009 and August 21, 2009, respectively. I also signed a Declaration in connection with this application on 12, 2010, and understand that Declaration was submitted to the PTO on March 17, 2010. The statements made in this Declaration are made in furtherance of my statements in those three previous Declarations.
3. I worked on the invention that is described and claimed in this application during the month of April 2004. As evidence of this, a true and accurate image of the screen from my personal computer is attached to this Declaration at Exhibit 1. The screen lists certain files stored on my computer's hard drive and also indicates the date and time when each file was last edited or modified.

Applicant : Jae Kap Lee & Phillip John.
Serial No. : 10/574,264
Filed : March 31, 2006
Page : 2 of 2

Attorney's Docket No.: 27573-0080 US1

4. One of the files listed on Exhibit A is a file named "onsio2" that was created using the program PowerPoint® by Microsoft Corporation. As indicated at Exhibit 1, the file "onsio2" was last edited or modified by me on April 6, 2004.

5. A true and accurate printed copy of the file "onsio2," as edited by me on April 6, 2004, is also attached to this Declaration, at Exhibit 2. The file describes the subject matter disclosed and claimed in this application. See Exhibit 2, e.g., at pages 4-5 and 11.

6. I declare that all statements made herein of my own knowledge and true, and that statements made on information and belief are believed to be true. I further declare that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine, or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the instant application or of any patent issued thereupon.

Respectfully submitted,

Date: 31 May 2010

Jae Kap Lee
Jae Kap Lee

Attachments:

- Exhibit 1 Screen image of personal computer of Jae-Kap Lee;
- Exhibit 2: Printed copy of file "onsio2"

EXHIBIT 1

patient-shell

파일(F)

편집(E)

보기(V)

출력(C)

도구(D)

도움말(H)

뒤로

앞으로

검색

출력

도움말

주소(1) D:\Data\Backup\2004\WinPost-d\doc\Winpaten-shell

바탕화면

내 문서

내 컴퓨터

3.5 플로피 (A)

파일 목록

patient-form

patient-factsheet

IDF2004

크기

종류

생성 날짜

451KB

Microsoft PowerPoint 프리젠테이션

2004-04-06 오후 10:18

33KB

Adobe Acrobat 7.0 Document

2004-04-20 오후 10:07

123KB

Adobe Acrobat 7.0 Document

2004-04-20 오후 10:03

103KB

Microsoft Word 문서

2004-05-06 오후 8:14

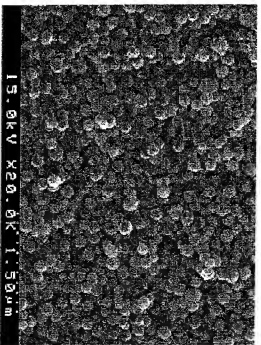
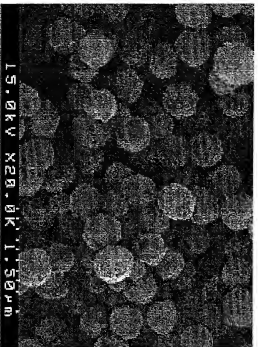
↑ explanation

File name	Date	Contents
onsio2	April 6, 2004	overview and schematic of this invention (pages 4, 5 & 11), revised on April 6, 2004
patent-form	April 20, 2004	form related reporting of invention to patent application between KIST and
patent-factsheet	April 20, 2004	Herriot-Watt Univ.
IDF2004	May 6, 2004	IDF, revised on May 6, 2004

Exhibit (a).

EXHIBIT 2

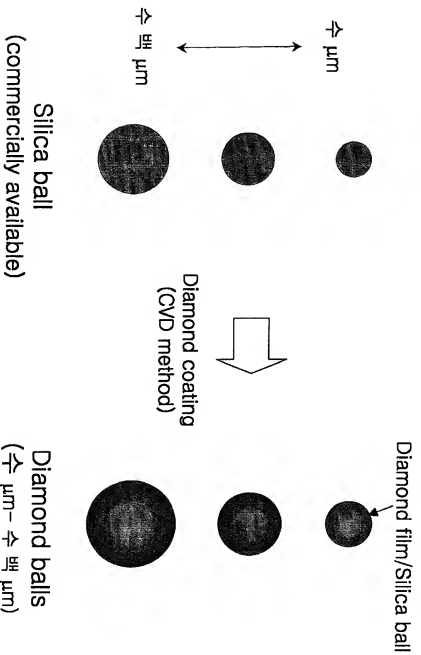
Diamond spheres



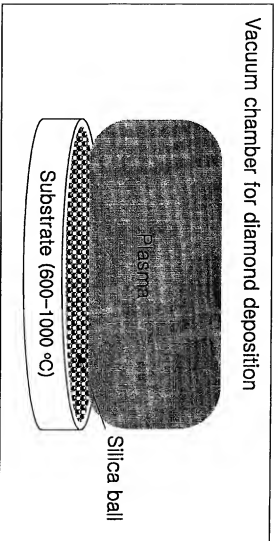
- Deposited under homogeneous nucleation condition (J.-K. Lee et. al., 한국 및 미국 patent)
- Size: 100 – 600 nm
- Polycrystalline(Grain size: ~30 nm)

Exhibit (b).

Fabrication of CVD diamond balls



Diamond coating



- Rotation of the silica balls keeping temperatures constantly
- It is not easy for diamond film to cover all surface area.

Fabrication of Hollow Diamond Cages

Silica balls



Diamond coating



Diamond film



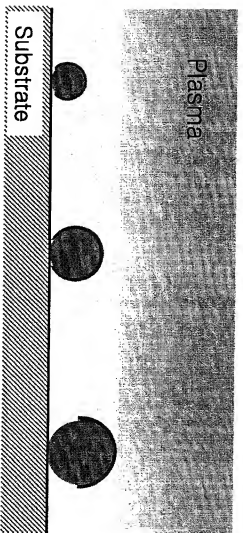
Silica etched out
(well known process)



Empty



Diamond shell

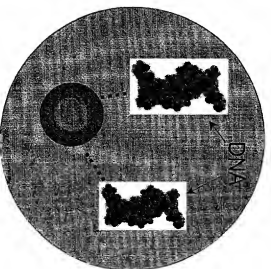
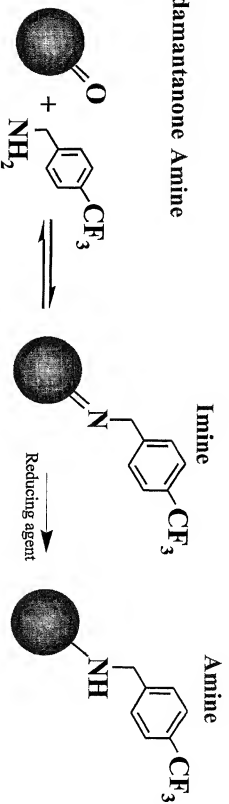


No need rotation
of the silica balls



Conventional equipments for
diamond deposition is available.

Adamantanone Amine



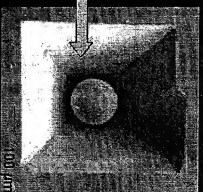
The University of Texas at Austin

Micromachines and Chemistry: Towards an "electronic tongue"

reference

pH (2.5, 5-7, 9-12)

sugars

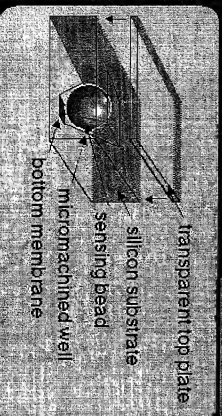


Has required an integrated effort of science and engineering faculty!

Eric Anslyn, John McDewitt,
and Jason Shear

• wide range of
potential
applications

- food, water
monitoring
- low cost, "real-time"
medical testing



transparent top plate

silicon substrate

sensing bead

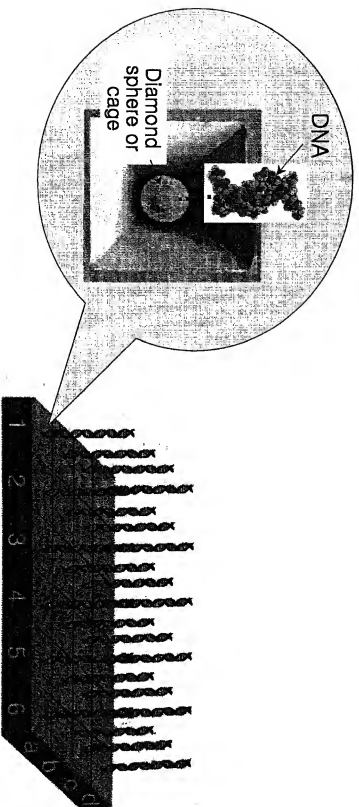
micromachined well

bottom membrane

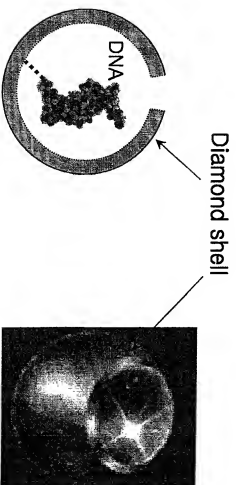
D. Neikirk

Micromachined sensor projects

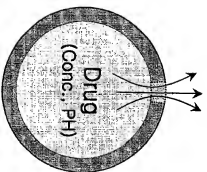
Application(1): Diamond DNA Microarray



Application(2): DNA preservation



Application(2): Drug Delivery System(DDS)



Drug Delivery System(DDS) or Implantable DDS

Fabrication of Micro-diamond shapes



Diamond film



Micro-diamond
cup



Diamond coating



Silica etching out



Micro-diamond
box



Micro-diamond
triangular cone

Silica
(if available)

Diamond shapes